



COLORADO MULTI-JURISDICTIONAL VEST ADVISORY COMMITTEE

MINUTES

Meeting No. 01-2006

*March 20, 2006
633 Seventeenth Street, Suite 1200
Denver, Colorado 80202*

The third meeting (Meeting No. 01-2006) of the Colorado Multi-Jurisdictional Vest Advisory Committee was called to order on March 20, 2006, at 8:45 a.m.

MEMBERS PRESENT

Colorado Department of Personnel and Administration (DPA)

Jeffrey Wells, Executive Director
Rod Wolthoff, Committee Chair
Michael Wallace, Committee Vice Chair
Ronda McGovern, *Staff*



Law Enforcement Representatives

Master Sergeant Deb Garde, Illinois State Police
Sergeant Tammy Vienot, Arapahoe County Sheriff's Office
Sergeant Marek Rybkowski, Denver Police Department
Sergeant Nicholas J. Roberts, Salt Lake County Sheriff's Office
Major Lee Lindsay, Utah Department of Corrections
Officer Nancy Gifford, Colorado Springs Police Department
Officer John Abraham, Seattle Police Department
Officer Richard Kehr, Los Angeles Police Department
Robert Dirnberger, Colorado State Patrol
Cindy Fredriksen, Colorado State Patrol
Catherine Bowman, Mesa, AZ Police Department



Manufacturer Representatives

Georg Olsen, US Armor
Terry Riccardi, US Armor
Jody Eberhart, First Choice Armor
Mike Ott, First Choice Armor (Non-Voting Member)
Terry Neve, Neve's Uniforms (Non-Voting Member)





State Agency Representatives

Frank Volk, Utah Purchasing Department
Ronda Miller, Nevada Division of Purchasing
Nancy McIntyre, Rhode Island Division of Purchases



Industry Representatives

Jeff Fackler, DuPont
Ken J. McCauley, DuPont



OTHER ATTENDEES

Chris Burklund, US Armor
Steve Kates, First Choice Armor
John Raimondi, MSA
Doug Campbell, MSA
Alex F. Cejas, Protective Products International
Matt Davis, Armor Express
Terry Hook, Armor Express
Mark Smith, Armor Holdings
Bob Weber, Armor Holdings
Harry Brown, ArmorShield USA
Jerry Eye, Public Safety Warehouse
Scotty Wylie, GatorHawk Armor
Phil Roux, S Armor
Randy Wills, Point Blank



I. Introductions and Initial Remarks

Committee Chair Rod Wolthoff welcomed those in attendance and called the meeting to order by introducing Jeffrey Wells, Executive Director of the Colorado Department of Personnel and Administration. Mr. Wells also welcomed those in attendance.

All individuals present then briefly introduced themselves to the Committee.

Mr. Wells stated that he was pleased to have numerous out-of state attendees present. Mr. Wells then provided background regarding the inception of the Colorado Verification Test (“CVT”) and summarized the events leading to the establishment of the Committee.

In October 2003, concerns surfaced regarding the quality and manufacture of certain protective vests in use in Colorado. The manufacturer of those vests was sued. As settlement, the manufacturer agreed to replace all of the protective vests in Colorado with Monarch vests.

Through this process, it was determined that Colorado could be the first state to develop a multi-jurisdictional bid process and become the center of national procurement. Representatives of the National Institute of Justice (“NIJ”) were approached with this proposal. Eventually, sixteen states joined the initiative, and in May 2004, Colorado issued its first bid solicitation.

In January 2005, at the suggestion of Committee Vice Chair Michael Wallace, Colorado issued a second bid solicitation including not only NIJ qualifications, but also “used vest” testing requirements. The January 2005 solicitation required compliance with NIJ and CVT standards. CVT standards necessitate tests of new and completely manufactured protective vests directly “out of the box.”

In May 2005, Colorado developed a qualified products list of the vests that passed CVT standards. <http://www.colorado.gov/dpa/dfp/spo/vests.htm>

In March 2006, Colorado issued a third bid solicitation. The goal for the third solicitation is to increase the number of qualifying manufacturers because many law enforcement agencies’ reimbursement policies require compliance with NIJ and CVT standards.

Mr. Wells informed those in attendance that the Western States Contracting Alliance (“WSCA”) is now providing the Committee with budgetary funds in support of the Committee’s goals to attract numerous manufacturers, create a list of CVT qualified products, and to centralize procurement.

II. Administrative

Committee Participation:

Mr. Wallace, noting that a quorum had been achieved, reiterated that it is a goal of the Committee to maintain a member balance between law enforcement personnel, agency representatives and manufacturers. Non-members are welcomed to attend and participate at Committee meetings, but they will not be permitted to vote on official Committee actions.

III. Colorado Verification Test History and Test Data

Mr. Wallace again provided a PowerPoint presentation outlining the current NIJ standards (0101.04), as well as the 2004 and 2005 CVT test criteria. Mr. Wallace reported that the NIJ's interim standards, effective September 26, 2005, would most likely be replaced by permanent standards in August 2006. *See Attached File: [CO-MJVAC Goals and Objectives](#)*

IV. Committee Recommendations to the NIJ

Mr. Wolthoff reported that the Committee had not received much feedback from the NIJ regarding the Committee's November 10, 2005 recommendations in response to the NIJ's RFI. The recommendations were summarized as follows:

1. That the NIJ change the size of the required templates for testing to be more indicative of the range of body armor sizing of the officers in the field. In particular, that a "small" size template be used which would reflect those worn by smaller males and females.
2. That the NIJ reduce the number of test shots to three for the "small" panels while retaining the standard six shots for the larger panels, requiring two "small" panels be tested as one complete data set to acquire the statistical data similar to the large panel testing.
3. That the NIJ publish specific guidance on the disposal of expired or used vests.
4. That the NIJ establish reasonable standards for the care, wear, use, inspection, storing, maintenance, and recording of body armor during the lifetime of that armor.
5. That the NIJ require every body armor manufacturer to achieve ISO certification.

6. That NIJ interim standards regarding the submittal of evidence to support the stated warranty period become part of the permanent standards.

Discussion:

Mr. Wallace stated that the new CVT bid solicitation requires tests of smaller panels and does not address the “2-inch from the edge” NIJ standard. He does not believe that the NIJ permanent standards will require tests on small vests. If the NIJ tests are performed on large swatches (“horseblankets”), then the results will not be indicative of the actual finished product.

Catherine Bowman suggested that the Committee develop a list of FAQs regarding CVT standards in order to inform officers that the end products they purchase may not have been subject to testing. She would like to receive information from all manufacturers regarding the sizes of vests they test.

Mr. Wallace reported that thirty-three percent of the officers killed on duty while wearing body armor were shot above the vests because the shooters fixate on the officers’ weapons. The majority of shot failures in CVT independent testing occurred at the top of the vests near the neck. This occurs because the materials are thinner and sag at that point.

Officer John Abraham stated that most end users do not investigate or research body armor test results, but instead trust those in the industry to inform them about the safest products. He believes that those in the industry and the Committee should provide end users with all available testing information. Master Sergeant Deb Garde concurred, stating that the information received from manufacturers often differs from the information received from the NIJ and from end users.

Bob Weber would prefer that manufacturers produce V-50 test results for each round over the entire lifecycle of a vest so that degradation results could be disseminated.

The meeting was adjourned at 9:55 a.m. and called back to order by Mr. Wolthoff at 10:26 a.m.

Motion: Jody Eberhart moved to clarify that Committee membership is open to all law enforcement agencies and CVT awarded manufacturers. Voting privileges should be modified so that votes are made on behalf of agencies and manufacturers, not made as individuals. The motion was seconded and carried unanimously.

V. New CVT Bid Solicitation

Mr. Wallace informed those in attendance that the new CVT bid solicitation would require used vest testing. At the November 4, 2005 Body Armor Manufacturer Discussion Group Meeting, Committee members and other attendees collaborated in an effort to agree on acceptable used vest testing standards. As a result, the Verification Equivalency Shot Test (“V.E.S.T.”) Protocol was established.

V.E.S.T. Protocol:

The V.E.S.T. Protocol would demonstrate a simple pass/fail result. Used vest samples would be collected by end-using agencies, and the samples would have an evaluation process to determine a normal, or median-wear score based on established criteria. Panels scoring an acceptable wear history and appearance would proceed to testing at an NIJ certified test lab.

Sample panels would be shot with actual duty or over-the-counter ammunition, with the caliber or size, and fps of the ammunition being those required by the NIJ 0101.04 Standard criteria. Acceptable fluctuations in the fps would be based off of +/- 100 fps, not the current +/- 30 fps.

Each panel would be shot with the ammunition 10 times, with an acceptable result being NO penetrations within the proper fps, and an unacceptable result being a partial or complete penetration (as defined in the NIJ 0101.04 Standard).

If all 10 shots fail to penetrate the panel at all, then the product would be judged in compliance with a used vest standard. Any panel allowing a partial or complete penetration would not be in compliance with a used vest standard.

This test would satisfy the “bottom line” that officers and end users are trying to derive from the current test protocols. The often complex and confusing V-50 test would be reserved only for manufacturers to use internally, or for testing of materials before construction of vests.

This test would also alleviate any burden to establish acceptable V-50 variances over the lifecycle of a vest panel. This simple pass/ fail test would tremendously simplify the explanation of testing to end users.

Discussion:

Mr. Weber reported that the NIJ recognizes the highest reference fps number at V-0 for each vest. His company has tested 630 used vests to date, for 114 customers. In his opinion, those customers are not confused by the V-50 standards. He believes that the CVT used vest testing requirements should include a minimum V-50 standard. He would also prefer that vests be replaced if they fall below the NIJ V-50 standard throughout the 5-year warranty period.

Mr. Wallace explained that the V.E.S.T. Protocol does not establish minimum standards. The new CVT standard may modify the fluctuation velocity from +/- 30 fps to +/- 100 fps. Pass means no partial or complete penetration at +/- 30 fps variance. It is easier to explain the pass/fail standard to end users. The Committee determined that there is not enough *available* data to establish minimum V-50 standards.

Mr. Eberhart stated that the goal was to maintain a buffer between the minimum standards, meaning that a higher safety margin above +/- 30 fps is necessary.

Officer Richard Kehr reported that he does not consider V-50 test results because a large variance exists and because his fellow officers do not understand the V-50 concept. Officers simply want vests that will stop the rounds they face on the street throughout the entire warranty period. Measuring the maximum velocity of rounds faced by the officers and insuring that the vests will stop those rounds at the maximum velocity form his criteria. Los Angeles sends a used vest for testing each year. Officer Kehr suggested that each jurisdiction determine which rounds their end users face and purchase vests that exceed NIJ standards for those rounds.

Mr. Wallace stated that CVT member states could purchase vests that exceed the increased CVT standards. The CVT standard can be considered a minimum baseline. It is important to note that the increased CVT standard is a higher standard because it requires used vest testing and because it addresses the issue that NIJ certified vests fail when they are tested as new products. He believes that the V.E.S.T. Protocol is an important step in the right direction; although the +/- 100 fps velocity standard in the CVT bid solicitation may need to be revised (perhaps to +/- 50 fps).

Mr. Weber itemized several concerns regarding the V.E.S.T. Protocol and opined that a better alternative would be to establish minimum V-50 standards. Mr. Weber stated that his company might choose not to bid in response to the new solicitation.

Matt Davis voiced his concerns regarding the V.E.S.T. Protocol, including his opinion that problems arise when comparing V-50 test results. The V-50 standard is an average penetration stop standard.

Sergeant Nicholas Roberts voiced his concern that “over-the-counter ammunition” is undefined.

Mr. Wallace clarified that the statement in the protocol was not intended as a test standard. It is justification for raising the fps standard in fluctuation. The protocol is simply stating that the NIJ specifies +/- 30 fps, and CVT wants to raise that specification to +/- 50 fps. NIJ test rounds will still be used, but at the increased fps standard, and the results will be pass/fail.

Ms. Bowman and Mr. Weber agreed that it would be acceptable to use NIJ test ammunition at the increased fps velocity standard for CVT purposes.

Major Lee Lindsay reported that his agency has experienced two failures of CVT awarded products(did he say CVT?), and that officers will not wear some vests because they are too heavy.

Mr. Wolthoff explained that the Committee is attempting to institute higher standards than the current NIJ interim standards, while recognizing the fact that used vest testing is complicated.

Mr. Wallace added that the CVT standards should be aligned with the NIJ standards. Currently, vests are not stopping the rounds that they are certified to stop, and the NIJ is not testing used armor.

Motion: Sergeant Roberts moved that the new CVT bid solicitation include standards based on the NIJ’s specifications, but with an increase of the +/- fps mean velocity. The motion was seconded and carried unanimously.

The meeting was adjourned at 11:42 a.m. and called back to order by Mr. Wolthoff at 1:21 p.m.

Point of Order:

Motion: Georg Olsen moved that the minutes of the November 3, 2005 meeting be approved with date modification. The motion was seconded and unanimously approved.

VI. Subcommittees

Warranty/QA/QC Subcommittee:

Mr. Wallace reported that Jeffrey Cantrell is no longer participating as the Chair of this subcommittee. Mr. Eberhart stated that he had been in communication with Mr. Cantrell, and that the subcommittee recommends that manufacturer warranties be contingent on yearly product inspections. Mr. Eberhart requested that three or four Committee members be assigned to this subcommittee.

Motion: Upon motion duly made, Major Lindsay was nominated to serve as the new Chair of the Warranty/QA/QC Subcommittee. The motion was seconded and carried unanimously.

Motion: Upon motion duly made, Sergeant Marek Rybkowski, Officer Nancy Gifford, and Nancy McIntyre were nominated to join Mr. Eberhart as members of the Warranty/QA/QC Subcommittee. The motion was seconded and carried unanimously. (At the March 21, 2006 pre-bid meeting, Terry Riccardi was also added as a member of the subcommittee).

Care, Wear, Fit and Maintenance Subcommittee:

Mr. Olsen reported that he is in possession of a script for a generic, online informational video addressing the basics in wear, care and maintenance. This video, though developed with input from DuPont and Hexcel, is a noncommercial product.

Action Item: Prior to the next meeting of the Committee, Mr. Olsen will provide Mr. Wallace with a copy of the video script. Committee members will discuss the script at the next Committee meeting.

Used Vest Testing/CVT Subcommittee:

Mr. Wallace reported that the V.E.S.T. Protocol, with potential revisions, would be the CVT standard for used vest testing.

Action Item: Prior to the next meeting of the Committee, Mr. Olsen will provide Mr. Wallace with a copy of the Homeland Security bid, which covers 100,000 agencies and includes multi-year testing protocols.

VII. Insurance/Warranties/Bonds

Discussion:

Mr. Wallace stated that he had researched product recall insurance and discontinued recall insurance. He believes these types of insurance would provide some leverage to state agencies by allowing them to file claims against manufacturers for defective vests, and would expedite claim resolution. Mr. Wallace solicited comments from manufacturer representatives regarding the effect or impact of these policies.

Mr. Olsen questioned whether any aggrieved party's concerns regarding product replacement are not addressed by manufacturers' existing insurance policies and warranties.

Ms. Bowman stated that manufacturers have different types of coverage. Agencies would prefer consistent policies.

Mr. Davis stated that product liability insurance is extremely expensive. Product recall insurance is less expensive, but cost is definitely an issue. Requiring insurance would result in increased product costs.

Mr. Wallace voiced his concern that, should a CVT manufacturer go out of business, officers and agencies would have no recourse for replacement. Further, if CVT determines that vests have failed, insurance would allow CVT to obtain funds for agencies needing to replace those vests. Currently, if a manufacturer goes out of business, the product liability clause stays in effect throughout the life of the product. However, the warranty period ends.

Mr. Eberhart suggested that the new CVT bid hold manufacturers to a limited replacement timeframe if their warranty includes recall replacement. However, Mr. Wallace opined that many manufacturers would not bid if that were a specification.

Sergeant Roberts reported that the Utah Attorney General has stated that bond provisions are legal. Bonds are less expensive and could be required in the event a manufacturer goes out of business.

Mr. Wallace stated that bonds are in effect only until vests are delivered to end users. He would like to require bonds that are in effect for five years after the last vest is shipped, even if the manufacturer goes out of business. The CVT and all participating agencies would be named insureds.

Mr. Wolthoff stated that research should be performed to determine if performance bonds could be placed in effect beyond the life of a business. If insurance is not reasonably priced, then CVT should require an expedient contract remedy.

Mr. Eberhart stated that performance bonds cannot be purchased to cover every type of incident, and bonds would add strictly to the costs of manufacturers. He reiterated his opinion that it would be better to require manufacturers to comply with replacement timelines.

Ms. Bowman opined that end users would prefer an expedient replacement mechanism. She further stated that bond issuers and insurance agencies should be provided with explicit failure definitions so they will not develop their own definitions. Mr. Wolthoff stated that failure definitions could be included in the CVT bid.

Action Item: Prior to the next meeting of the Committee, Mr. Wolthoff and Mr. Wallace will research the option of discontinued product coverage. If it is determined that a product would still be covered after a manufacturer went out of business, that option will be acceptable.

Officer Gifford, Sergeant Roberts, Major Lindsay and Robert Dirnberger voiced their consensus that the CVT bid must define product failures.

Mr. Davis suggested that failures of two vests from the same lot should constitute a model failure.

Mr. Weber reported that the military tests by lots, and that there is a negotiating period allowed for remedies.

Mr. Wolthoff reviewed the Department of Homeland Security's failure definitions and suggested that those definitions could be incorporated into the CVT bid.

The meeting was adjourned at 2:39 p.m. and called back to order by Mr. Wolthoff at 3:16 p.m.

Action Item: Prior to the next meeting of the Committee, Mr. Wolthoff will draft warranty provision language for the CVT bid using current DHS standards.

VIII. Test Standards

Mr. Wallace stated that certain requirements of the V.E.S.T. Protocol, such as panel sizes, numbers of shots, and shot locations, should be specified and defined.

Discussion:

Mr. Weber recommended that small panels be tested with four shots. He reported that the NIJ tested small panels shot at 3 inches, resulting in trauma failures. A small panel must be defined to determine if four shots would fit on one.

Major Lindsay suggested that 4 rounds be tested within a specific diameter on the panels and that the rounds be shot from different angles.

Mr. Wallace stated that CVT requirements should be similar to NIJ requirements so if there is a failure, the NIJ will believe that the CVT test is reliable. He does not believe that diameter shots would instill a higher degree of credibility with the NIJ.

Sergeant Roberts stated his opinion that the NIJ will be flexible, understanding that the 6-shot standard cannot apply to small panels.

Mr. Wallace stated that testing three shots on each of two small panels would result in enough data points. The Committee has voted on the 3- shot standard and submitted that recommendation to the NIJ. Now that standard cannot be revised without a compelling reason. Mr. Wallace further stated his opinion that six small panels (3 vests) and three large vests per model should be tested each year. He would like to collect the vests from across different climate zones to account for degradation. All CVT testing is wet testing.

Mr. Wallace recommended that tests of small panels consist of two straight shots using NIJ 0101.04 standard specified rounds at +/- 50 fps, and one shot at an angle. Mr. Wallace clarified the special use provision under the NIJ standard that allows an agency to request that a manufacturer test the vest the agency has purchased with a different round. The special use provision allows the departments or the CVT to leverage manufacturers to test with special use rounds. If manufacturers provide those results to the CVT, the results will be posted on the CVT website.

Mr. Davis questioned whether or not products that pass the new NIJ test would be grandfathered in as CVT awarded products. Mr. Wallace said that that would not occur. Transversely, if products are only CVT tested, even though the test is more stringent, the NIJ will not automatically certify the products. Colorado must be able to independently verify that a CVT tested vest is a full production vest.

Mr. Eberhart stated that all manufacturers should attempt to convince the NIJ to accept a positive CVT test result for certification. This would result in manufacturers having to test only one vest, and would get vests to end users more quickly. Ms. Bowman stated that law enforcement agencies could also lobby the NIJ for this result.

Sergeant Roberts voiced his opinion that testing only one vest would affect federal funds, thus requiring a change in federal law. Mr. Wallace disagreed, stating that the NIJ will still oversee the process and vests could still be sold under the NIJ certification. CVT would be willing to send vests to the NIJ after testing.

Motion: Mr. Eberhart moved that the Committee recommend to the NIJ that the NIJ accept CVT tested vests for certification. The motion was seconded and carried unanimously.

Action Item: Prior to the next meeting of the Committee, Mr. Wolthoff and Mr. Wallace will draft correspondence to the NIJ proposing that the NIJ accept CVT tested vests for certification.

IX. Administrative

The scheduling of the next Committee meeting was taken under consideration. Members will be notified of the next meeting date.

Motion: Mr. Wolthoff moved to adjourn the meeting. The motion was seconded and carried unanimously.

The meeting adjourned at 4:24 p.m.